

***LineUp With Math™* Alignment**
Wisconsin Model Academic Standards
Mathematics Content Standards and Performance Standards

Content Standard A. Mathematical Processes

Students in Wisconsin will draw on a broad body of mathematical knowledge and apply a variety of mathematical skills and strategies, including reasoning, oral and written communication, and the use of appropriate technology, when solving mathematical, real-world and non-routine problems.

Performance Standards

A.12.1 Use reason and logic to:

- evaluate information
- perceive patterns
- identify relationships
- formulate questions, pose problems, and make and test conjectures
- pursue ideas that lead to further understanding and deeper insight

***LineUp With Math™* Activities**

--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

--Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.

A.12.2 Communicate logical arguments and clearly show

- why a result does or does not make sense
- why the reasoning is or is not valid
- an understanding of the difference between examples that support a conjecture and a proof of the conjecture

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

A.12.3 Analyze non-routine* problems and arrive at solutions by various means, including models* and simulations, often starting with provisional conjectures and progressing, directly or indirectly, to a solution, justification, or counter-example

--Choose and apply a variety of strategies to optimize the solution of air traffic control conflicts.

--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

A.12.5 Organize work and present mathematical procedures and results clearly, systematically, succinctly, and correctly

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Content Standard B - Number Operations And Relationships

Students in Wisconsin will use numbers effectively for various purposes, such as counting, measuring, estimating, and problem solving.

Performance Standards	LineUp With Math™ Activities
<p>B.12.2 Compare real numbers using</p> <ul style="list-style-type: none"> ratios, proportions, percents, rates of change 	<p>--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.</p> <p>--Use percent relationships to resolve distance, rate, time conflicts in air traffic control.</p>

Content Standard D: Measurement

Students in Wisconsin will select and use appropriate tools (including technology) and techniques to measure things to a specified degree of accuracy. They will use measurements in problem-solving situations.

Performance Standards	LineUp With Math™ Activities
<p>D.12.1 Identify, describe, and use derived attributes* (e.g., density, speed, acceleration, pressure) to represent and solve problem situations</p>	<p>--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.</p> <p>--Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.</p>
<p>D.12.3 Determine measurements indirectly*, using</p> <ul style="list-style-type: none"> estimation proportional reasoning, including those involving squaring and cubing (e.g., reasoning that areas of circles are proportional to the squares of their radii) techniques of algebra, geometry, and right triangle trigonometry formulas in applications (e.g., for compound interest, distance formula) 	<p>--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.</p> <p>--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.</p>